

“GROW-YOUR-OWN” PROGRAMS CAN HELP EXPAND AND DIVERSIFY THE TEACHER WORKFORCE

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CENTRAL QUESTION

Can high school pathway programs help expand and diversify the teacher workforce?

“Grow-your-own” (GYO) programs are amongst the most popular and prominent strategies through which states and school districts locally identify and recruit prospective teaching talent. The defining characteristic of GYO programs is that they recruit non-teachers (e.g., high school students, instructional aides, community members) in the vicinity of a school district into the teaching profession, while implicitly assuming (or explicitly requiring) that successful recruits will eventually teach in the local system.¹ In practice, GYO has morphed into an umbrella term claimed by many flavors of localized teacher recruitment, though the majority of self-described GYO programs target high school students.²

Despite the growing popularity of GYO programs³, however, there exists little credible evidence of their effectiveness.⁴ We contribute to this gap in the literature by examining the impacts of the **Teacher Academy of Maryland (TAM)**, a GYO program that provides high school students with early exposure to teaching as a career through a course-based Career and Technical Education (CTE) sequence. Upon completing all four TAM courses and passing the ParaPro assessment, students earn their industry-recognized certificate. Students also can transfer TAM credits to two- or four-year college degree programs.

We examine the effects of TAM on educational attainment milestones that are prerequisites for becoming a teacher (e.g., high school graduation, college enrollment, receipt of a BA degree), employment as a teacher, and wages.

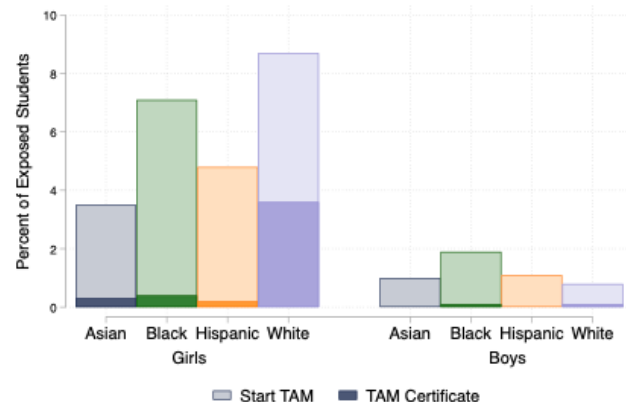
KEY FINDINGS

TAM participants are primarily Black and White girls.

In Figure 1, we show demographic characteristics of students who participated in TAM when it was offered in their school. Our sample includes five cohorts of 9th graders (SY 2008-09 to 2012-13), whom we can follow for ten years, from high school to career. We focus on schools that newly offered TAM in these years (N = 20), which is central to our strategy for estimating program impacts.

We find that White girls were most likely to start TAM (i.e., enroll in at least one course; 9%). For Black girls, takeup rates were slightly lower at 7%. Roughly one-third of students who started TAM earned a certificate, driven primarily by White girls. Average completion rates are similar to other CTE areas and contexts, where scholars have identified CTE “dabblers” who explore but do not necessarily complete the CTE sequence.⁵ Even without a certificate, TAM may still affect the likelihood of becoming a teacher by providing early exposure to the profession.

Figure 1. TAM Takeup and Completion



About this Brief. The University of Maryland College of Education’s **Maryland Equity Project (MEP)** seeks to improve public education through research that supports an informed public policy debate about the quality and distribution of educational opportunities in Maryland and nationally. To learn more, [follow us on X](#) and [subscribe to our email list](#). A version of this brief is published by the Urban Institute. The [full academic paper](#) is posted on our website: Blazar, D., Gao, W., Gershenson, S., Goings, R., & Lagos, F. (2024). Do grow-your-own programs work? Evidence from the Teacher Academy of Maryland.

TAM increased HS graduation and college enrollment.

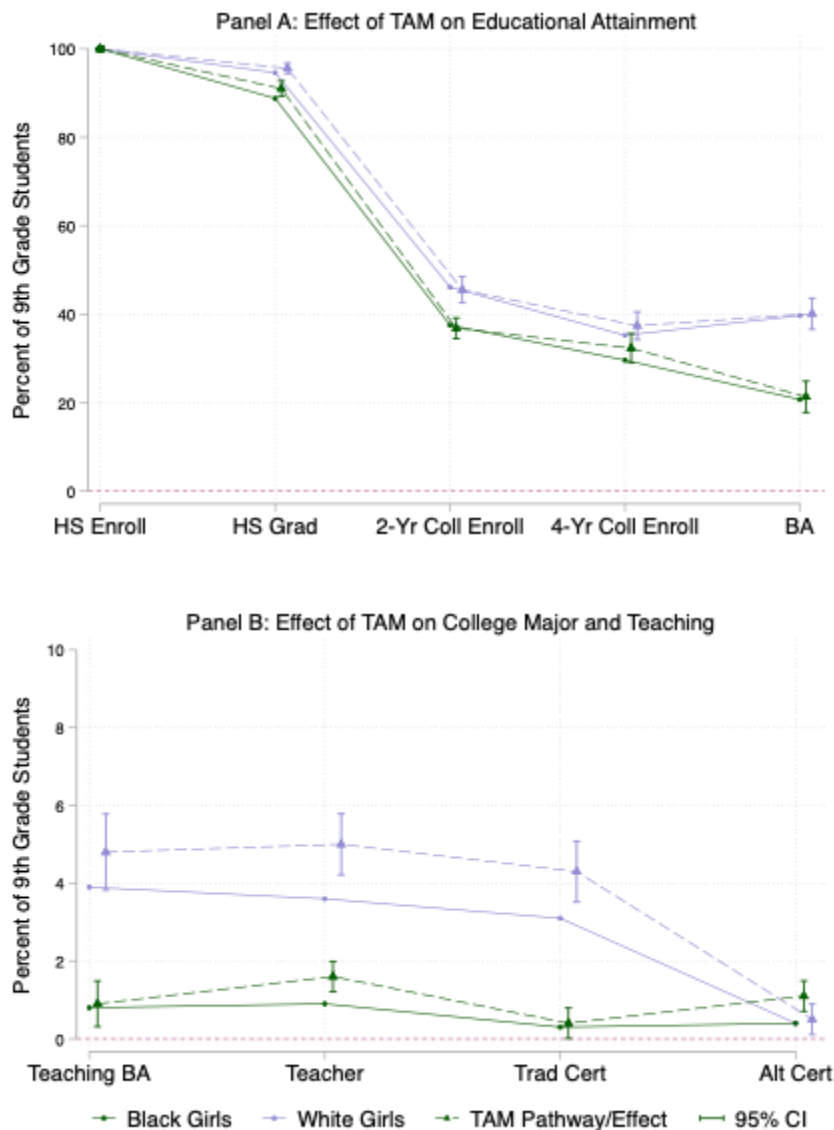
We visualize the effects of TAM in Figure 2, which shows the share of 9th graders in our sample who advanced to various educational attainment (Panel A) and teaching-related (Panel B) milestones. We focus on Black and White girls, who were most likely to enroll in TAM. Solid lines represent average trends. TAM’s impacts are represented as dashed lines and triangles, with vertical 95% confidence interval bands.

Figure 2 shows that TAM increased high school graduation, within six years. The impact is largest for Black girls (2.2 percentage point [pp]), though the effect on White girls is

significant as well (1pp). Because six-year high-school graduation rates are high, the effects are small relative to the comparison group (3% and 1% change for Black and White girls, respectively).

Exposure to TAM also increased four-year college enrollment by 1.7pp, or 6%, on average. Estimates are positive for both Black and White girls, but confidence intervals are large for each subgroup on its own. The effects on two-year college enrollment are negative while the effects for four-year college enrollment are positive. This suggests that TAM potentially shifted college-going from two- to four-year institutions.

Figure 2. Impact of TAM on Multiple Stages on the Pathway from High School to Teaching



TAM increased the likelihood of becoming teachers in Maryland, especially for Black and White girls.

Overall, exposure to TAM increased the likelihood that individuals went on to become teachers by 0.6pp. Given that entering teaching is a rare event observed for roughly 1.3% of public high school students, this effect represents a large increase of 47%.

However, this average effect masks heterogeneity across demographic groups. In absolute terms, the effect is larger for White girls (1.4pp) than for Black girls (0.7pp). The reverse is true when effects are captured in percent changes (39% for White girls and 80% for Black girls), as White girls in our sample were four times as likely to become teachers as Black girls.

The pathways to becoming a teacher also vary notably between Black and White girls. White girls induced by TAM to become teachers almost all received a BA in teaching and a traditional teaching license. In contrast, we find no effect of TAM on a BA in teaching for Black girls, who instead entered the profession through alternative pathways. Alternative or conditional licenses require a BA degree (though not necessarily in teaching) and allow individuals to work full-time while pursuing requirements for full certification (i.e., coursework, testing).

TAM increased wages relative to other labor-market opportunities, with the largest effects for Black girls.

Finally, Figure 3 shows that average wages increased with exposure to TAM, with the largest gains accruing to Black girls (18%). Exposure to TAM did not significantly reduce the average earnings of any demographic group. This finding is important given concerns that GYO programs like TAM may cause students to leave more lucrative majors and career pathways for teaching.

RESEARCH METHODS

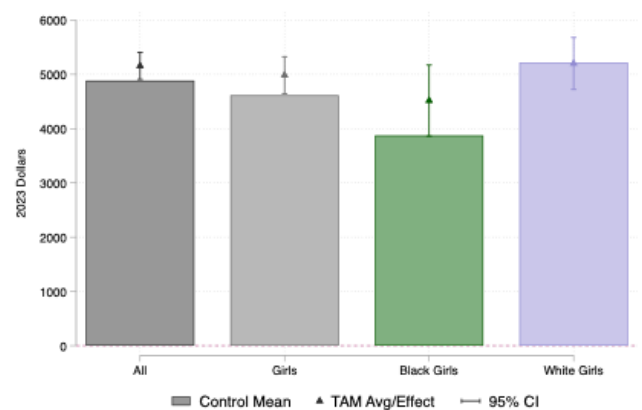
Our analysis is made possible by data from the Maryland Longitudinal Data System (MLDS) Center, which links person-level data across K-12 records, post-secondary education, and employment outcomes.

We identify program impacts using what is known as a difference-in-differences (DD) strategy, which exploits variation across schools in the timing of TAM adoption. Across the five cohorts in our sample, some were fully exposed to TAM because their high school adopted the

program when students were in 9th or 10th grade, giving them enough time to take the four required courses. Older cohorts in these same schools did not have access to TAM because they happened to start high school several years before adoption. We also compare students in these treated schools that newly offered TAM in the timeframe of our analyses to other high schools that never offered TAM.

Importantly, we observe that, across a range of outcome measures, treated and untreated cohorts were trending in similar fashion (i.e., “parallel trends”), which allows us to interpret our DD estimates causally.

Figure 3. Estimated Effects of TAM on Quarterly Earnings



POLICY IMPLICATIONS

TAM can help address teacher shortages.

The effects are encouraging along several dimensions. TAM induced exposed high school students to become teachers in Maryland public schools at markedly higher rates than their counterparts. Our estimates are policy relevant and provide insight on how school-level adoption of the TAM program influences longer-run outcomes, recognizing that only a small subset of students participate. Given perennial concerns about teacher shortages⁶ and more recent concerns that interest in teaching is rapidly declining⁷, GYO programs like TAM can be a fruitful avenue for building pathways into the profession.

TAM can help diversify the workforce, to some extent.

GYO programs like TAM may also help diversify the profession, which is a central goal of many program designers and policymakers. In the absence of TAM, the rate at which White girls become teachers is four times the rate for Black girls (3.6% versus 0.9%). With TAM, rates

increase to 5% and 1.6%, for White and Black girls respectively, or a three-fold difference.

For TAM to help close this gap even further, program expansion efforts could target schools and districts with large populations of students of color not already offering TAM. We find suggestive evidence that the positive effects on Black girls are driven by large, urban school districts that implement TAM in a subset of high schools and where there is substantial room for expansion.

Expansion and diversification efforts must also consider potential mechanisms and how these differ between groups. While White girls largely followed the path laid out by the program (i.e., earning a TAM certificate and then a BA in teaching), Black girls followed a different pathway. We hypothesize that TAM likely benefited White girls by making the process of becoming a teacher easier, vis-a-vis dual-enrollment credits, while the effects for Black girls may be driven by exposure to teaching.

Addressing low takeup of boys, Hispanic, and Asian students.

Despite the positive outcomes of TAM for Black and White girls, its uptake remains relatively low among boys, Hispanic, and Asian students. One potential solution may be to increase demographic representation amongst TAM teachers, who are largely White females. Admittedly, though, there is a “chicken and egg” problem here.

Another solution may be to refine the TAM program and curriculum to focus on cultural relevance, which includes addressing the historical reasons why individuals of color are underrepresented in teaching.⁸ The low numbers of teachers of color is not happenstance, but a manufactured problem that resulted, in large part, from systematically pushing teachers of color out of the profession following school integration efforts.⁹

Reframing the narrative on teaching as a financially viable career.

There is a prevailing perception that teaching is not a financially rewarding career, which can deter potential candidates. If GYO programs like TAM cause students to leave more lucrative majors and career pathways for teaching, that would be problematic from an equity perspective.¹⁰

However, we find that exposure to TAM did *not* significantly reduce the average earnings of any demographic group,

and that it significantly increased earnings for Black women. These findings support other literature noting that employment in education (as well as in government) offer more equitable access to upward mobility for Black and Hispanic individuals than most other job sectors.¹¹

Acknowledgements

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Endnotes

¹ Valenzuela, A. (2017). Grow Your Own Educator Programs: A Review of the Literature with an Emphasis on Equity-Based Approaches. *Literature Review. Equity Assistance Center Region II, Intercultural Development Research Association.*

² Edwards, D. S., & Kraft, M. A. (2024). Grow Your Own: An Umbrella Term for Very Different Localized Teacher Pipeline Programs.

³ Garcia, A. (2020). Grow Your Own Teachers: A 50-State Scan of Policies and Programs. *New America.*

⁴ Gist, C. D., Bianco, M., & Lynn, M. (2019). Examining grow your own programs across the teacher development continuum: Mining research on teachers of color and nontraditional educator pipelines. *Journal of Teacher Education, 70*(1), 13-25.

⁵ Ecton, W. G., & Dougherty, S. M. (2023). Heterogeneity in high school career and technical education outcomes. *Educational Evaluation and Policy Analysis, 45*(1), 157-181. Performance outcomes of CTE students are available through [public dashboards](#).

⁶ Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2019). Understanding teacher shortages: An analysis of teacher supply and demand in the United States. *Education Policy Analysis Archives, 27*(35).

⁷ Kraft, M. A., & Lyon, M. A. (2022). The Rise and Fall of the Teaching Profession: Prestige, Interest, Preparation, and Satisfaction over the Last Half Century. EdWorkingPaper No. 22-679. *Annenberg Institute for School Reform at Brown University.*

⁸ Carter Andrews, D. J., Castro, E., Cho, C. L., Petchauer, E., Richmond, G., & Floden, R. (2019). Changing the narrative on diversifying the teaching workforce: A look at historical and contemporary factors that inform recruitment and retention of teachers of color. *Journal of Teacher Education, 70*(1), 6-12.

⁹ Fenwick, L. T. (2022). *Jim Crow's pink slip: the untold story of black principal and teacher leadership*. Harvard Education Press. Thompson, O. (2022). School desegregation and Black teacher employment. *Review of Economics and Statistics, 104*(5), 962-980.

¹⁰ Gershenson, S., Hart, C. M., Hyman, J., Lindsay, C. A., & Papageorge, N. W. (2022). The long-run impacts of same-race teachers. *American Economic Journal: Economic Policy, 14*(4), 300-342.

¹¹ Escobari, M., Seyal, I., & Contreras, C. D. (2021). *Moving up: Promoting workers' upward mobility using network analysis*. Brookings Institution.